

In the Specification

For the convenience of the Examiner, a clean copy of the amended portions of the specification is provided below. Please refer to Appendix A for mark-ups reflecting changes to the specification.

Please replace the paragraphs on Page 1 under the "Cross Reference to Related Applications" heading with the following paragraphs:

This application claims the benefit of serial number 60/100,975, entitled "Supply Chain Management Tool With Profit Optimization," filed September 18, 1998.

This application is related to U.S. Application No. 09/374,461, ^{now U.S. Patent No. 6,577,304} entitled "System and Method for Visually Representing a Supply Chain," filed August 13, 1999, and U.S. Application No. 09/397,473, ^{now U.S. Patent No. 6,486,899} entitled "System and Method for Displaying Logistics Information Associated with a Supply Chain," filed September 17, 1999.

On Page 2, please replace the paragraph beginning on Line 2 with:

Business enterprises use computer-implemented management systems to model supply chains and to provide plans for producing and delivering products and services to customers. Typically, management systems address planning decisions as constrained optimization problems. For example, in a manufacturing environment, a management system may schedule a sequence of tasks for a piece of manufacturing equipment. The management system might specify start times for each task according to one or more optimization criteria, such as minimizing inventory, maximizing profit, or maximizing resource utilization. The management system might also consider various constraints, such as the capabilities of the equipment or deadlines by which products must be delivered to customers. Previous systems are inadequate for many needs, particularly with respect to the manner in which planning information associated with supply chains is provided to users of these systems.

On Page 5, please replace the paragraph beginning on Line 21 with:

03
Enterprise model 24 represents a supply chain in terms of its products and their component parts. To produce and deliver products to customers, an enterprise must use resources to perform various activities. These resources may include raw materials, component parts, labor, manufacturing facilities and equipment, distribution channels, transportation resources, warehouses, sales support, or any other resources that may affect the enterprise's ability to produce and deliver products to customers. For profit optimization planning, enterprise model 24 generates, for each product in a supply chain, cash inflows and cash outflows that represent revenues and expenses associated with the products. In a particular embodiment, model 24 calculates expenses by representing costs according to the times at which the costs occur. This method of calculating expenses more accurately reflects the time value of money than an accrual method that does not recognize costs until a sale occurs. Model 24 includes raw material costs, operation costs, inventory carrying costs, handling costs, or any other suitable costs that accompany supply chain activities in any suitable combination. In a particular embodiment, model 24 stores raw material costs in terms of dollars/unit, operation costs in terms of dollars/unit or dollars/hour, inventory carrying costs in terms of dollars/unit/time, and handling costs in terms of dollars/unit.

On Page 7, please replace the paragraph beginning on Line 9 with:

04
Presentation interface 28 provides a user interface for inputting data affecting model 24, for scenario analysis of model 24, and for viewing planning information generated by engine 26. Based on the planning information generated by engine 26, presentation interface 28 generates several supply chain reports, singly or in any suitable combination, which are described in further detail below with reference to FIGURES 2-9.

[On Page 7, please replace the paragraph beginning on Line 14 with:]

Enterprise model 24, planning engine 26, and presentation interface 28 operate on one or more computers 14 that include at least one processor 30. Computer 14 receives information from a user using an input device 18, which may include a keyboard, mouse, touch-screen, microphone, or any other device that accepts information. Computer 14 presents visual display 32 to the user using output device 20, which may include a computer monitor, a projector, a printer, or any other suitable device with a display screen or other

visual output capability. In a particular embodiment, computer 14 is a network server, and users interact with computer 14 using one or more client computers 22. In such an embodiment, client computers 22 may provide planning information to various personnel at geographically distributed locations.

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{On Page 7, please replace the paragraph beginning on Line 24 with: }

FIGURES 2-9 illustrate exemplary visual displays 32 generated by presentation interface 28 and displayed using output device 20. Although the supply chain reports in FIGURES 2-9 relate to the steel industry, presentation interface 28 may generate and output device 20 may display similar supply chain reports relating to any suitable single-enterprise or multi-enterprise industry or supply chain environment. In a particular embodiment, visual display 32 presents the reports in one or more application windows that include pull-down menus, tool bars, or other suitable graphical user interfaces to receive commands, instructions, options, or other input from a user. Using any of the supply chain reports described with reference to FIGURES 2-9, a user can simulate and evaluate proposed supply chain plans developed by planning engine 26.

On Page 11, please replace the paragraph beginning on Line 8 with:

As
Run rate bar graph 106 associates each product identifier 110 with a bar 128 indicating a rate at which units are processed by a selected resource. Using pull-down selector 126, a user selects a resource in the supply chain. In the illustrated embodiment, a user again has selected the hot roll mill with an 88 percent utilization rate. In response to the user selection, run rate bar graph 106 associates each product identifier 110 with a bar 128 indicating a rate at which the selected resource, in this case the hot roll mill, processes units of each identified product. In the illustrated embodiment, run rate bar graph 106 also includes numerical values 130 indicating the rates of processing and ranks 132 indicating relative relationships among the processing rates. Although the processing rates are specified in terms of units produced per hour, processing rates may be determined over days, weeks, months, quarters, years, or any other suitable time periods.
